



Lessard-Sams Outdoor Heritage Council

St. Louis River Restoration Initiative Phase 7
Laws of Minnesota 2020 Accomplishment Plan

General Information

Date: 09/29/2022

Project Title: St. Louis River Restoration Initiative Phase 7

Funds Recommended: \$2,280,000

Legislative Citation: ML 2020, Ch. 104, Art. 1, Sec. 2, subd 5(k)

Appropriation Language: \$2,280,000 the second year is to the commissioner of natural resources to restore priority aquatic and riparian habitats in the St. Louis River estuary. A list of proposed restorations must be provided as part of the required accomplishment plan.

Manager Information

Manager's Name: Melissa Sjolund

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Location Information

County Location(s): St. Louis.

Eco regions in which work will take place:

- Northern Forest

Activity types:

- Restore

Priority resources addressed by activity:

- Habitat

Narrative

Abstract

MNDNR's St. Louis River Restoration Initiative (SLRRI) is a collaborative program enhancing and restoring this unique and valuable resource. The SLRRI's vision for the estuary includes diverse, productive, and healthy aquatic and terrestrial ecosystems of the river and watershed. Contributing to this vision, MNDNR works with partners throughout the 12,000-acre estuary to identify and prioritize key projects and implement previously identified projects that restore 35 acres of priority aquatic and riparian habitat. When Phase 7 is complete, approximately 596 acres of habitat will have been restored, using OHF funds to leverage a substantial amount of federal funding.

Design and Scope of Work

The St. Louis River Restoration Initiative (SLRRI) and OHF partnership began in 2014 to achieve fish and wildlife habitat restoration in the St. Louis River Estuary (Estuary) that contributes to the delisting of the St. Louis River Area of Concern (AOC). The partnership has effectively and efficiently restored wetland, stream and open water aquatic habitats. This proposal includes projects identified by the 2002 Lower St. Louis River Habitat Plan (Habitat Plan) and the 2013 St. Louis River Remedial Action Plan. When accomplished, these projects will move toward complete implementation of the vision described in the Habitat Plan and will maintain investments already made in the Estuary. Funding for this phase of the SLRRI will be leveraged with Great Lakes Restoration Initiative (GLRI) funding. The MNDNR will continue to closely coordinate with SLRRI partners to integrate, prioritize, and develop fish and wildlife restoration projects throughout the estuary, building on lessons learned from completed projects. In addition, work on specific project sites within the SLRRI program area for previously identified priority sites will continue. In Phase 7 of the SLRRI, MNDNR will continue to apply its broad partnership to construct 35 acres of restored fish and wildlife habitat.

Mud Lake is a warm water fish and migratory bird restoration project. Mud Lake is an estuarine bay and wetland complex upstream of the US Steel Superfund Site. It is degraded by legacy wood waste and bisected by a railroad causeway. The SLRRI team will work in close coordination with the MPCA, USEPA, and the City of Duluth to address sediment contamination, enhance hydrologic connection, remove legacy wood waste, and restore aquatic ecological function.

Kingsbury and Keene Creeks are trout stream restoration projects. Phase 7 will support Keene Creek design and Kingsbury Creek design and construction to enhance the creeks' connection to their floodplains, reduce sedimentation, restore trout habitat, and increase resiliency of Estuary restoration efforts currently being completed with earlier OHF appropriations.

Lower Knowlton Creek is a trout stream restoration project. The project will produce a design to remove a fish and wildlife migration barrier along recently restored Knowlton Creek between the Estuary and Magney-Snively Forest Complex and restore a natural stream channel.

How does the plan address habitats that have significant value for wildlife species of greatest conservation need, and/or threatened or endangered species, and list targeted species?

The 12,000 acre St. Louis River Estuary, at the head of Lake Superior, is a unique Minnesota resource. It is the largest source of biological productivity to Lake Superior as well as the world's largest freshwater shipping port. The combination of extensive wetlands, warmer waters, and the connection to Lake Superior resulted in it becoming the primary source of productivity for the western Lake Superior fishery and a critical flyway for waterfowl and other migratory birds. Nearly two-thirds of the estuary's native wetlands have been altered, eliminated or impaired as a result of historic impacts of dredging, filling and waste disposal associated with industrial activities. Although economic uses in the industrialized portion of the Estuary continue, many of the historic problems associated with waste disposal have been addressed through the Clean Water Act and subsequent actions. The proposed projects represent an opportunity to balance economic activities, while restoring the negative impacts of historic uses. Additionally, restorations will directly benefit SGCN and other species by improving habitat quality and extent in strategic locations to maximize benefits to populations.

As the Outdoor Heritage Fund's 2009 25-year frame work states, "Success in conservation will depend highly on leveraging traditional and other sources of conservation funding with available OHF funds and coordinating efforts with conservation partners." The proposed project is integrated with local, state, federal, tribal and non-government partners that have worked together to advance projects and secure non-OHF funding at of approximately 50%. Minnesota's legacy funds are an integral part of the overall strategy to restore the health of this unique resource.

Describe how the plan uses science-based targeting that leverages or expands corridors and complexes, reduces fragmentation or protects areas identified in the MN County Biological Survey:

The 1980's were the turning point for the Estuary. Wastewater and sewage treatment plants improved water quality it became clear that the Estuary's fish and wildlife populations could recover if habitat conditions were restored. MNDNR worked with many local, state and federal resource experts and stakeholders to develop the Habitat Plan, a comprehensive science based plan for protecting, restoring and managing fish and wildlife of the St. Louis River Estuary.

MNDNR uses science-based targeting to identify, design, monitor, and ensure the quality of the proposed projects. MNDNR worked with many local, state, tribal and federal resource professional as well as stakeholders to develop the Habitat Plan, which is a comprehensive science-based plan for protecting, restoring, and managing the Estuary's fish and wildlife habitat. Partners developed the Habitat Plan to guide and prioritize restoration work, and it has been the foundation of the SLRRI.

AOC partners used a source-stressor model to identify impairments to the Estuary. The model identified conservation targets, stresses limiting those targets, and recommended actions to address the source of the stress. All project areas supported by the GLRI also require the development of a Quality Assurance Plan to measure the successful outcomes of the conservation actions.

Restoration Site Teams (RSTs) are developed for each implementation project to identify site-specific restoration targets and objectives. Natural resource managers, ecologists, biologists, and St. Louis River AOC partners associated with the estuary examine conceptual restoration project alternatives and assess and evaluate habitat benefits and tradeoffs between conceptual designs using both qualitative and quantitative measures of habitat value. Site-specific habitat needs and opportunities are also evaluated in the context of Estuary-wide restoration objectives and planned or completed projects. Knowledge transfer from previously completed OHF-funded projects is facilitated in RSTs by engaging local resource experts on multiple SLRRI projects.

Scientists from University of Minnesota, National Oceanic and Atmospheric Administration, U.S. Environmental Protection Agency, U.S. Fish & Wildlife Service, MNDNR, and MPCA continue to monitor and evaluate the Estuary's fish and wildlife populations and habitat to prioritize restoration projects, model expected outcomes of restoration alternatives, and evaluate restoration outcomes.

Which two sections of the Minnesota Statewide Conservation and Preservation Plan are most applicable to this project?

- H2 Protect critical shoreland of streams and lakes
- H6 Protect and restore critical in-water habitat of lakes and streams

Which two other plans are addressed in this program?

- Lower St. Louis River Habitat Plan
- U.S. Fish and Wildlife Service Strategic Habitat Conservation Model

Which LSOHC section priorities are addressed in this program?

Northern Forest

- Protect shoreland and restore or enhance critical habitat on wild rice lakes, shallow lakes, cold water lakes, streams and rivers, and spawning areas

Does this program include leveraged funding?

No

Per MS 97A.056, Subd. 24, Please explain whether the request is supplanting or is a substitution for any previous funding that was not from a legacy fund and was used for the same purpose.

No, this request is not supplanting any previous funding.

Non-OHF Appropriations

Year	Source	Amount
2012	Federal Dollars (NOAA, NFWF, USEPA, USFWS)	-
2014	Federal Dollars (NOAA, USEPA)	-

How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended?

MNDNR Duluth Area Fisheries manages the Lower St. Louis River through regular monitoring, assessment and regulation. They are partnered with the WDNR, the MPCA, USEPA MED Lab, and NOAA's National Estuary Research Reserve in the effort to monitor and address issues associated with the long-term maintenance of habitat restoration outcomes in the estuary.

St. Louis River habitat restoration projects are designed to be maintained by the natural processes that define these systems. Barring catastrophic events, these projects will not require future adjustment, or clean-up. Restoration of submerged aquatic vegetation beds at locations such as the ones proposed will consider the water depth, substrate type and wave energy environment required to maintain these systems. Similarly, stream restoration at proposed locations will take into account all pertinent morphological and geographical information to produce an appropriate and resilient outcome.

Healthy and robust native communities are resistant to invasion by exotic species. If invasive species successfully establish on a site they can disrupt the food web of the native community and result in reduced populations of desirable native species. Restoration of native plant communities will inhibit the establishment of invasives and MNDNR is partnered with the other entities described above to control them.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
All Years	Fish & Wildlife Game & Fish fund	Regular Surveys/monitoring	-	-
All Years	WDNR, MPCA, USEPA, NOAA	Long-term monitoring at specific sites	-	-

Activity Details

Requirements

If funded, this program will meet all applicable criteria set forth in MS 97A.056?

Yes

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program?

Yes

Is the restoration and enhancement activity on permanently protected land per 97A.056, Subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 or on lands to be acquired in this program?

Yes

Where does the activity take place?

- Public Waters

Land Use

Will there be planting of any crop on OHF land purchased or restored in this program?

No

Timeline

Activity Name	Estimated Completion Date
Project prioritization, integration, and development; site-specific coordination	June 2025
Kingsbury Creek – Reduce sedimentation, restore cold-water fisheries habitat and enhance recreational fishing	December 2021
Mud Lake – Enhance hydrologic connection, remove legacy wood waste and restore ecological functions	December 2022
Keene Creek – Produce design to reduce sedimentation, restore cold-water fisheries habitat and enhance recreational fishing	December 2022
Lower Knowlton Creek – Produce design to remove causeway and restore a natural stream channel	December 2023

Date of Final Report Submission: 11/01/2025

Availability of Appropriation: Subd. 7. Availability of Appropriation

Money appropriated in this section may not be spent on activities unless they are directly related to and necessary for a specific appropriation and are specified in the accomplishment plan approved by the Lessard-Sams Outdoor Heritage Council. Money appropriated in this section must not be spent on indirect costs or other institutional overhead charges that are not directly related to and necessary for a specific appropriation. Unless otherwise provided, the amounts in this section are available until June 30, 2023. For acquisition of real property, the amounts in this section are available until June 30, 2024, if a binding agreement with a landowner or purchase agreement is entered into by June 30, 2023, and closed no later than June 30, 2024. Funds for restoration or enhancement are available until June 30, 2025, or five years after acquisition, whichever is later, in order to complete initial restoration or enhancement work. If a project receives at least 15 percent of its funding from federal funds, the time of the appropriation may be extended to equal the availability of federal funding to a maximum of six years if the federal funding was confirmed and included in the original approved draft accomplishment plan. Funds appropriated for fee title acquisition of land may be used to restore, enhance, and provide for public use of the land acquired with the appropriation. Public-use facilities must have a minimal impact on habitat in acquired lands.

Budget

Budget reallocations up to 10% do not require an amendment to the Accomplishment Plan.

Totals

Item	Funding Request	Antic. Leverage	Leverage Source	Total
Personnel	\$915,000	-	-	\$915,000
Contracts	\$1,185,800	-	-	\$1,185,800
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$1,300	-	-	\$1,300
Professional Services	\$69,000	-	-	\$69,000
Direct Support Services	\$76,400	-	-	\$76,400
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	\$30,000	-	-	\$30,000
Supplies/Materials	\$2,500	-	-	\$2,500
DNR IDP	-	-	-	-
Grand Total	\$2,280,000	-	-	\$2,280,000

Personnel

Position	Annual FTE	Years Working	Funding Request	Antic. Leverage	Leverage Source	Total
FAW AOC Project Manager	1.0	3.0	\$347,000	-	-	\$347,000
EWR AOC Coordinator	0.5	3.0	\$188,000	-	-	\$188,000
EWR Restoration Consultant	0.5	3.0	\$180,500	-	-	\$180,500
FAW OAS	0.8	3.0	\$199,500	-	-	\$199,500

Amount of Request: \$2,280,000

Amount of Leverage: -

Leverage as a percent of the Request: 0.0%

DSS + Personnel: \$991,400

As a % of the total request: 43.48%

Easement Stewardship: -

As a % of the Easement Acquisition: -

How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount?

Mud Lake restoration is prioritized for construction funding as it is an action required to delist the St. Louis River

AOC by 2025. Staff time and other resources will be devoted to advancing the designs of Keene and Lower Knowlton Creeks and the design and construction of Kingsbury Creek restoration.

Contracts

What is included in the contracts line?

\$1,185,800 is budgeted to fund construction of the Mud Lake habitat restoration project.

Travel

Does the amount in the travel line include equipment/vehicle rental?

No

Explain the amount in the travel line outside of traditional travel costs of mileage, food, and lodging

n/a

I understand and agree that lodging, meals, and mileage must comply with the current MMB Commissioner Plan:

No

Direct Support Services

How did you determine which portions of the Direct Support Services of your shared support services is direct to this program?

Used Direct and Necessary calculator provided by DNR OHF staff.

Federal Funds

Do you anticipate federal funds as a match for this program?

Yes

Are the funds confirmed?

No

What is the approximate date you anticipate receiving confirmation of the federal funds?

January 2020

Output Tables**Acres by Resource Type (Table 1)**

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	0	0	0	35	35
Protect in Fee with State PILT Liability	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	0	0
Enhance	0	0	0	0	0
Total	0	0	0	35	35

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	\$2,280,000	\$2,280,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	-	-
Total	-	-	-	\$2,280,000	\$2,280,000

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	0	0	0	35	35
Protect in Fee with State PILT Liability	0	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0
Enhance	0	0	0	0	0	0
Total	0	0	0	0	35	35

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	-	\$2,280,000	\$2,280,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	-	-	-
Total	-	-	-	-	\$2,280,000	\$2,280,000

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	\$65,142
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	-	-	-

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	-	\$65,142
Protect in Fee with State PILT Liability	-	-	-	-	-

Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	-	-

Target Lake/Stream/River Feet or Miles

10,000

Outcomes**Programs in the northern forest region:**

- Improved availability and improved condition of habitats that have experienced substantial decline ~ *MNDNR evaluates habitat restoration effectiveness using a variety of physical and biologic metrics measured pre- and post-project. Completed restoration associated with the AOC will be measured in acres of habitat restored and evaluated to remove beneficial use impairments and ultimately delist the AOC.*

Parcels

For restoration and enhancement programs ONLY: Managers may add, delete, and substitute projects on this parcel list based upon need, readiness, cost, opportunity, and/or urgency so long as the substitute parcel/project forwards the constitutional objectives of this program in the Project Scope table of this accomplishment plan. The final accomplishment plan report will include the final parcel list.

Parcel Information

Sign-up Criteria?

No

Explain the process used to identify, prioritize, and select the parcels on your list:

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Perch Lake	St. Louis	04815209	3	\$1,185,800	Yes
Keene Creek	St. Louis	04915212	0	\$0	Yes
Mud Lake	St. Louis	04815202	32	\$0	Yes
Kingsbury Creek	St. Louis	04915214	0	\$0	Yes
Lower Knowlton Creek	St. Louis	04915223	0	\$0	Yes

Parcel Map



- Protect in Easement
- ▲ Protect in Fee with PILT
- Protect in Fee W/O PILT
- ★ Restore
- ✕ Enhance
- ✚ Other